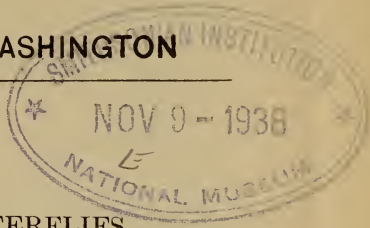


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



NOTES ON VIRGINIA BUTTERFLIES.

BY AUSTIN H. CLARK AND LEILA F. CLARK.

We have recently secured a number of records of Virginia butterflies of considerable interest. Among these are records of three species and two subspecies heretofore not known to occur in the State. We have taken *Zegris olympia* and *Pieris virginiensis* in Frederick County, and *Basilarchia archippus floridensis* and *Danaus plexippus nigrippus* in Princess Anne County, and in company with Mr. and Mrs. Ernest L. Bell we took *Atrytone dukesi* in Norfolk County. The addition of these five species and subspecies raises the number of butterflies definitely known from Virginia to 144.

In view of the rarity of *Amblyscirtes carolina* in collections we have thought it desirable to call attention to its wide distribution in the coastal plain. It is, however, nowhere very common. With it occurs *A. textor*, which is always more numerous and often abundant.

We wish to thank our friends Carroll M. Williams, Carroll E. Wood, Jr., Walter van Gelder, and W. Herbert Wagner for their kindness in permitting us to include some of their records with our own.

Basilarchia archippus floridensis (Strecker).

This subspecies is common about willows in the marshes from the southern end of Virginia Beach southward, but we have never found it outside of this restricted area, in which it occurs with *Cercyonis alope pegala*. The western border of the range of both these forms is roughly a line running somewhat west of south from Princess Anne Court House to the North Carolina border. Within this area is the single locality in which we have found *Atrytone dukesi*. At the Back Bay and at the northern end of Currituck Sound we have also found *Danaus plexippus nigrippus*.

Ever since its original description in 1878 *floridensis* appears to have been misunderstood. It was described as follows:

var. a. *FLORIDENSIS*, nob.—The form found in Florida and other parts of the extreme south. Whilst our more northern form is of the same colour as *Danaüs Plexippus*, this southern variety exactly mimics in its dark colouration *Danaüs Berenice*, with which it associates.

Strecker gave the range of his new variety as Florida, southern Alabama, Mississippi, and Louisiana.

Basilarchia archippus floridensis differs from typical *archippus* in being markedly darker, with the fore wings slightly darker than the hind wings. In the U. S. National Museum (Barnes collection) there is a specimen from Myakka City, Florida, that was compared with Strecker's type specimen of *floridensis* by the late Foster H. Benjamin, who noted that it was slightly darker than the type.

Our specimens from southeastern Virginia agree with this in all particulars, and one or two are even somewhat darker.

We have examined specimens of *Basilarchia archippus floridensis*, all now in the U. S. National Museum, from the localities listed below:

VIRGINIA: near the beach east of Pungo, Princess Anne Co., Sept. 4, 1938. GEORGIA. FLORIDA: Myakka City, Manatee Co., July, 1900. MISSISSIPPI: Vicksburg. LOUISIANA: Crowley, Sept. 28, 1911. TENNESSEE: Nashville, Aug. 16, 1923. MISSOURI: Curryville, Pike Co., June 1, 1889.

The confusion regarding *floridensis* appears to have arisen from the somewhat unfortunate comparison with *Danaus berenice*. It is a dark southern form of *archippus*, which it resembles in every way except for its darker color. It bears no close resemblance to *Danaus berenice*.

Following the description of var. a. *floridensis* Strecker described what he called ab. b. ♂ *Nig.* of *archippus*. His specimen of this was taken in Florida by Mr. Jacob Doll. This form, supposed by Strecker to be an aberration, was later described by W. H. Edwards as a new species under the name of *eros*, and Edwards' type specimen was figured by Dr. W. J. Holland in 1931 (pl. 73, figs. 1, 2). *Basilarchia archippus eros* is entirely distinct from *B. a. floridensis*. It is much darker with the fore and hind wings the same color, and bears a considerable resemblance to *Danaus berenice*. Edwards gives as the locality Indian River, Florida; we have found it common at Fernandina.

Phyciodes batesii (Reakirt).

Bedford Co.: Sunset Field, Apple Orchard Mountain, June 1, 1938 (Carroll E. Wood, Jr.).

Note.—This is the first definite record for this species in Virginia.

Argynnis diana (Cramer).

Northampton Co.: Bayford (Florence Walker). Surry Co.: Just west of Surry Court House, June 15, 1938. About two miles west of Spring Grove,

June 15, 1938. Cabin Point, June 15, 1938. *Pulaski Co.*: Little Walker Mountain, on the road from Pulaski to Mechanicsburg, July 31, 1938. Northeastern end of Little Walker Mountain, August 9, 1938. *Rockbridge Co.*: near Greenlee (Carroll E. Wood, Jr.). *Wythe Co.*: near the summit of Comer Rock, southwest of Speedwell, August 11, 1938. *Giles Co.*: Kerns, Interior, and Kire, August 12, 1938.

Notes.—We were surprised to find the males of this species quite common west of Spring Grove. We captured four on butterfly-weed (*Asclepias tuberosa*) in about twenty minutes, and saw others. Mrs. Barnes, whose flower garden we examined for butterflies, told us that sometimes there would be as many as twenty-five at one time about her butterfly-bush. We have never seen it so numerous elsewhere in Virginia, though we have found it fairly common in Poverty Hollow in Montgomery County, and along the road from Kerns to Kire in Giles County.

This fine species is now known from twenty counties in Virginia. Most of these are in the mountains, but it is found in Prince George, Isle of Wight, Nansemond, and Surry Counties in the coastal plain, and in Northampton County on the Eastern Shore. In the last named it is probably of only casual occurrence.

Danaus plexippus nigrippus Haensch.

Surry Co.: Two miles west of Spring Grove, June 15, 1938. *Princess Anne Co.*: Back Bay, July 4, 1938.

Notes.—There are two forms of this butterfly in Virginia. The typical form, *plexippus*, famous for its migrations, occurs over the entire State. It is most numerous in the higher regions in the west, but is fairly common on the coastal plain. On the coastal plain, and in the marshes about the northern end of Currituck Sound in North Carolina, there is found occasionally another form in which the preapical spots on the fore wings are light or whitish, sometimes almost pure white, the brown in the apical portion of the fore wings is largely or wholly obscured by black, and the small white spots in the black margin of the hind wings are much reduced or obsolete. This form is easily distinguished from true *plexippus* when on the wing.

As found in Virginia this form resembles the figure of *Danais plexippus* published by Dr. W. J. Holland in "The Butterfly Book." The specimen from which this figure was made was kindly looked up for us by Dr. Hugo Kahl and Mr. Ralph Chermock. It bears the label "*Danais erippus*, South America," and was purchased from Dr. O. Staudinger. There is a similar specimen from Salvador in the U. S. National Museum. Dr. W. T. M. Forbes writes us that, judging from the localities from which Dr. Staudinger secured his specimens, it may have come from Surinam, and that he has a series of specimens resembling it from Paramaribo. But, he adds, it might have come from Chanchamayo or some neighboring part of Peru.

Holland's figure represents the form of *plexippus* known as *nigrippus* found in Central and northern South America. In addition to those listed above from Virginia we have examined specimens from the following localities in the United States:

NORTH CAROLINA: Northern end of Currituck Sound, July 4, 1938.
FLORIDA: Key West; Lucien Harris, Jr., December 18, 1936. LOUISIANA:
Rigolets Pass, St. Tammany Parish, Percy Viosca, Jr.

Mr. Percy Viosca, Jr., was so kind as to send us 57 milkweed butterflies taken in November in St. Tammany Parish, Louisiana. Fifty-three of these, 22 males and 31 females, proved to be much worn migrants of *Danaus plexippus plexippus*, but four, three males and one female, were referable to *D. p. nigrippus*.

Dr. H. T. Fernald was so very good as to send, through Mr. James A. Hyslop, four specimens from Florida, one from Indian River City, December 6, 1934; one from the Cheney highway near the St. Johns River, April 1, 1935; and two from Orlando, April 25, 1931, and January 25, 1937. All of these represent *D. p. plexippus*.

We wish to call special attention to the fact that some of the milkweed butterflies of the coastal plain of Virginia appear to be indistinguishable from certain varieties of the tropical *nigrippus*, a non-migratory form, and to suggest the advisability of an intensive study of this insect as it occurs on the southeastern coastal plain, on the Gulf coast, and in southern Florida.

The female from Surry County was captured on butterfly-weed (*Asclepias tuberosa*). On July 5 on the same plant we found a partly grown caterpillar that may have come from an egg laid by this female.

Glaucopsyche lygdamus (Doubleday).

Frederick Co.: Collinsville, April 24, 1938. West of Cross Junction, near the West Virginia line, April 24, 1938. This butterfly is common a few miles west of here, in the region of Ice Mountain, West Virginia.

Atlides halesus (Cramer).

Nansemond Co.: Dismal Swamp near Suffolk, April 1, 1938. Lake Drummond, June 12, 1938. Edge of the Dismal Swamp, eight miles south of Suffolk, September 5, 1938.

Incisalia henrici (Grote and Robinson).

Frederick Co.: West of Cross Junction, near the West Virginia line, April 24, 1938; common along wood roads, and about the red-bud (*Cercis canadensis*).

Zegris olympia (W. H. Edwards).

Frederick Co.: Collinsville, April 24, 1938. West of Cross Junction, near the West Virginia line, April 24, 1938; frequent. This species is very common a few miles to the westward in the region of Ice Mountain, West Virginia.

Pieris virginienensis W. H. Edwards.

Frederick Co.: West of Cross Junction, a few hundred feet east of the West Virginia line, April 24, 1938.

Terias jucunda (Boisduval and LeConte).

Bedford Co.: Major, August 6, 1938 (Walter van Gelder). *Rockbridge Co.*: Near Greenlee, about July 30, 1938 (Carroll E. Woods, Jr.).

Papilio cresphontes Cramer.

Warren Co.: Front Royal, May 22, 1938; frequent.

Atrytone dukesi Lindsey.

Norfolk Co.: At the Norfolk County end of the bridge over Pocaty Creek on route 190, two and one half miles east of the intersection with route 165; on pickerel-weed along the north side of the road just before reaching the bridge; June 14 and July 4, 1938.

Notes.—In company with Mr. and Mrs. Ernest L. Bell we stopped at a small patch of pickerel-weed (*Pontederia*) at the side of the road just north of the bridge over Pocaty Creek, about which Mr. Bell had noticed some skippers. Of these Mr. Bell and the senior author each secured two males and one female—six in all. These were compared with the long series of *Atrytone dukesi* in the National Museum collection and were found to be identical in every particular. They were, however, much darker and more blackish, the Museum specimens having faded.

It was somewhat of a surprise to find this butterfly in Virginia, for it was known previously only from Mobile, Alabama. The type series was secured by Mr. W. C. Dukes on August 6, 27, and 29, 1922, and the species was described by Professor A. W. Lindsey in 1923. Mr. Bell collected it at Mobile between August 24 and September 2, 1925, recording his captures in 1926, and it has been found there by others up to October 11.

In this connection it is interesting to recall that *Atrytone dion alabamæ*, described by Professor Lindsey from Mobile and also taken there by Mr. Bell, was found in abundance by the authors in the Dahl Swamp in Accomac County, Virginia, a few years ago. In the region in which *A. dukesi* occurs in Virginia, however, we have found only the typical form of *A. dion*.

Amblyscirtes carolina (Skinner).

Prince George Co.: New Bohemia, June 25, 1937 (G. W. Rawson and W. H. Wagner). Swamp about two miles north of New Bohemia, June 22, 1936 (W. H. Wagner). *Surry Co.*: A short distance west of Surry Court House, June 15, 1938. *Greensville Co.*: Just east of Emporia, September 3, 1936. *Southampton Co.*: Cypress Bridge, July 23, 1936 (C. M. Williams). *Nansemond Co.*: Dismal Swamp near Suffolk, April 1, 1938; May 30, 1937; June 11, 14, 1938, 26, 29, 1937. Four miles south of Suffolk, May 30, 1937. About eight miles south of Suffolk, September 1, 1935. *Norfolk Co.*: Wallaceton, May 31, 1937. *Princess Anne Co.*: Princess Anne, September 4, 1938.